

**WHAT IS CLAIMED IS:**

1. A cathode ray tube comprising:
  - a front glass panel;
  - a funnel connected to the panel, thereby forming a vacuum tube;
  - an electron gun emitting electron beams; and
  - a deflection yoke deflecting the electron beams emitted from the electron gun in the horizontal and vertical direction; wherein the deflection yoke comprises:
    - a deflection coil wound of a coil wire deflecting the electron beams;
    - wherein the coil wire has a core reinforcing a magnetic field generated around the deflection coil, and the deflection coil wire comprises:
      - an aluminum core;
      - a copper layer surrounding the aluminum core; and
      - an insulating layer surrounding the copper layer.
2. The cathode ray tube according to claim 1, wherein the deflection coil wire further comprises a bonding layer.
3. The cathode ray tube according to claim 1, wherein copper is a main ingredient of the deflection coil, and aluminum is a main ingredient of auxiliary deflection coils.
4. The cathode ray tube according to claim 1, wherein copper is a main ingredient of the horizontal deflection coil, and aluminum is a main ingredient of the vertical deflection coil.
5. The cathode ray tube according to claim 1, wherein the deflection yoke further comprises a holder for insulating the horizontal and vertical deflection coils.

6. A cathode ray tube comprising:
  - a front glass panel;
  - a funnel connected to the panel, thereby forming a vacuum tube;
  - an electron gun emitting electron beams; and a deflection yoke deflecting the electron beams emitted from the electron gun in the horizontal and vertical direction;
  - wherein the deflection yoke comprises:
    - a deflection coil wound of a coil wire deflecting the electron beams;
    - a core reinforcing a magnetic field generated around the deflection coils,
  - wherein the deflection coils comprises:
    - an aluminum core; and
    - an insulating layer including an insulator at a predetermined thickness surrounding the aluminum core.
7. The cathode ray tube according to claim 6, wherein the deflection coil is a horizontal deflection coil or a vertical deflection coil.
8. The cathode ray tube according to claim 7, wherein the deflection coil is a saddle type.
9. The cathode ray tube according to claim 7, wherein the deflection coil is a toroidal type.
10. The cathode ray tube according to claim 6, wherein the deflection coil further comprises a bonding layer with adhesives being formed around the circumference of the insulating layer.
11. The cathode ray tube according to claim 10, wherein the deflection coil is a horizontal deflection coil or a vertical deflection coil.

12. The cathode ray tube according to claim 11, wherein the deflection coil is a saddle type.
13. The cathode ray tube according to claim 11, wherein the deflection coil is a toroidal type.
14. The cathode ray tube according to claim 6, wherein the deflection coil has a diameter ranging from 0.1mm to 0.7mm.
15. The cathode ray tube according to claim 14, wherein the deflection coil has a diameter ranging from 0.1mm to 0.4mm, and is used for a monitor.
16. The cathode ray tube according to claim 14, wherein the deflection coil has a diameter ranging from 0.2mm to 0.7mm, and is used for a TV.
17. The cathode ray tube according to claim 6, wherein the aluminum layer has a cylindrical shape.
18. The cathode ray tube according to claim 6, wherein the deflection yoke comprises at least one of a rotation coil, a degaussing coil, a cancel coil, a CY coil, a CF coil, and a fetch line.
19. The cathode ray tube according to claim 6, wherein the deflection yoke further comprises a holder for insulating the horizontal and vertical deflection coils.
20. A conductive coil wire, comprising:
  - a conductive aluminum core;
  - an insulating layer surrounding the conductive core; and
  - a bonding layer including an adhesive surrounding the insulating layer.
21. The conductive coil according to claim 20, further comprises a copper layer surrounding the conductive aluminum core.

22. The conductive coil according to claim 20, wherein the conductive coil has a diameter ranging from 0.1mm to 0.7mm.